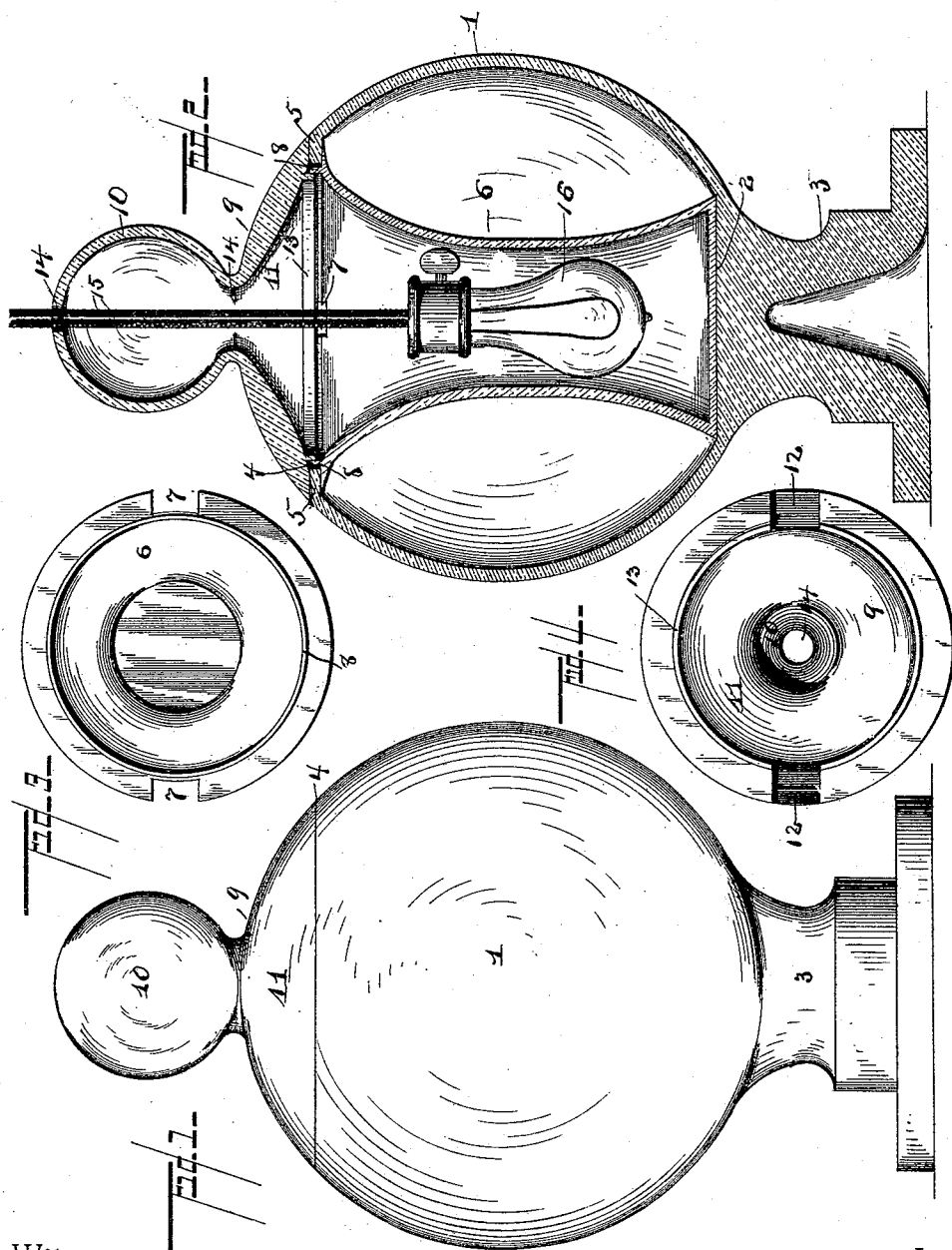


(No Model.)

O. BERGER & H. ELDRIDGE.
SHOW GLOBE.

No. 465,516.

Patented Dec. 22, 1891.



Witnesses:

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UNITED STATES PATENT OFFICE.

OTTO BERGER AND HILLIARY ELDRIDGE, OF GALVESTON, TEXAS.

SHOW-GLOBE.

SPECIFICATION forming part of Letters Patent No. 465,516, dated December 22, 1891.

Application filed August 4, 1891. Serial No. 401,629. (No model.)

To all whom it may concern:

Be it known that we, OTTO BERGER and HILLIARY ELDRIDGE, citizens of the United States, residing at Galveston, in the county of Galveston and State of Texas, have invented a new and useful Show-Globe, of which the following is a specification.

This invention relates to improvements in illuminating and other globes; and the objects in view are to provide a globe adapted to serve simply for the purpose of illumination and furnishing a pure white bright light for general purposes, or to serve as an illuminated show-globe for druggists.

A further object of the invention is to adapt the globe to receive a liquid, either colorless or colored, and to receive an illuminating medium that may shine through and be intensified by the liquid and the walls of the globe, which latter act as lenses.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is an elevation of a globe constructed in accordance with our invention. Fig. 2 is a vertical longitudinal section. Fig. 3 is a detail in plan of the inner vessel or tube. Fig. 4 is a similar view of the cover, the same being inverted.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing our invention we construct a hollow globe 1 of glass and provide the internal cavity or chamber of the same with a flat bottom 2. Cast with the globe or otherwise secured thereto is a suitable stand or base 3, which supports the globe in proper position. If desired, the stand or base may be omitted, and in lieu of the same other means of support employed—as, for instance, suitable suspension devices commonly employed for supporting globes of this character. The globe is provided at its top with a circular opening 4, and at diametrically-opposite sides lugs 5 extend inwardly from the openings.

6 denotes a tube concaved between its up-

per and lower ends and internally bored or hollow. The base of the tube and also its upper end are circular and of a diameter adapting them to pass through the opening 4 of the globe into the interior thereof, said base resting upon the flat bottom 2 within the globe. The top of the tube 6 at diametrically-opposite sides has notches 7, which permit the tube to pass the lugs 5 of the globe, which lugs serve to lock the tube within the globe and against displacement, when said tube is partially rotated, after having been inserted, whereby its notches 7 are disposed out of alignment or register with the lugs. On the other hand, by rotating the tube so that its notches align with the lugs said tube may be readily removed from the globe. The tube is slightly shorter than the depth of the globe from the opening to the flat bottom, so that when in position within the globe the upper end of the tube is slightly below the edge of the opening, whereby the edge of the opening forms an annular rim surrounding the upper end of the tube. The tube is also provided with a shallow bead or flange located within the inner edges of its notches and extending parallel to its periphery. This flange or bead 8 combines with the edge of the opening 4 of the globe to form an annular recess, for a purpose hereinafter apparent.

9 designates the removable cover, which consists of the knob 10, located upon the upper side of the concavo-convex cover or base portion 11. The exterior of the base is so formed as to constitute a continuation of the exterior of the globe when the cover is in position, and the base is of such diameter as to adapt it to fit within the edge of the opening 4 of the globe and also outside of the bead 8 of the tube 6, upon which latter the outer annular edge of the cover rests. Upon its under side the cover is provided with diametrically-opposite notches 12, which receive the lugs 5, and thereby the cover is prevented from undue looseness or rotation. The cover is also provided with an annular bead or flange 13 of such diameter as to adapt the same to fit within the annular bead or flange 8 of the tube. The cover is further provided

with a central opening 14, extending from the top through the base of the same and communicating with the upper open end of the tube, it being understood that the lower end of said tube is closed, as shown.

In practice a sufficient quantity of liquid, either plain (colorless) or colored, is poured into the globe 1, after which, in the manner hereinbefore described, the tube is inserted bottom end first into the globe, and displacing the liquid the latter rises and fills the space between the globe and tube, so that the liquid is bounded at its outside by the convex wall of the globe and upon its inside by the concaved wall of the cylinder, which, like the globe, is also formed of glass. Electric-light wires 15 are now passed through the opening 14 of the cover, and to the terminals of the same is attached a suspended incandescent-electric light 16, which, when the cover is in position upon the globe, will be supported within the cylinder 6. By this construction, if the liquid be colored, as employed in show-globes of drug-stores, it will be seen that we provide a globe from which the colored light will be radiated in all directions, and thus we greatly improve and reduce the cost of maintenance of the old style of show-globe, which consisted merely of a jar of colored liquid with a light placed behind it, and which therefore simply radiated colored light at points substantially diametrically opposite the lighting medium. In such practice it is therefore necessary to employ two globes at least and also two lights, and even then the rays of light were directed only up and down the street or in two directions, one from each globe. We thus reduce the cost of maintenance by providing a globe adapted to deflect the rays in all directions and requiring but one globe and one light. Furthermore, the convex lenses formed by the walls of the globe and the cylinder greatly intensify or increase the illuminating-power, so that it can be seen at longer distances.

By substituting colorless liquid for the colored liquid the globe may be adapted for general lighting purposes, the operation being exactly the same as heretofore described, and the only difference being in the character of the light furnished. Greater advantages arise by thus illuminating an apartment, in that the rays of light are not only intensified through the doubly-convex transparent walls of the globe and the tube and the interposed liquid, but the same are more evenly distributed, dif-

fused in all directions, and softened, whereby the glare so injurious to the eyes is avoided.

Having described our invention, what we claim is—

1. The herein-described illuminating-globe, the same consisting of the external globular vessel having an opening for the reception of a lighting device and an internal concaved tube mounted in the globe, substantially as specified.

2. The herein-described illuminating-globe, the same consisting of the globular vessel having an opening at its top provided with lugs located at the edges of the opening, and an inner tube mounted in the vessel and having an upper flared mouth, notched to receive the lugs, said cylinder being shallower than the globe and therefore adapted to be rotated under the lugs, substantially as specified.

3. The herein-described illuminating-globe, the same consisting of the spherical globular vessel having an opening, said vessel being provided with a suitable stand and below its opening with a flat bottom, the inner vessel or tube mounted in the outer vessel, having a closed bottom and resting upon the flat bottom of the outer vessel, said inner vessel having a flared upper end and shallower than the outer vessel and provided upon its upper end or mouth with an annular bead, and the cover consisting of a knob and a circular convex base, the two having an opening for the reception of electric-light wires, said base being adapted to fit between the bead of the inner cylinder and the edge of the opening in the outer cylinder and upon its under side provided with an annular bead adapted to fit within the bead of the inner cylinder, substantially as specified.

4. The combination of the globular vessel having an internal smaller concaved tube, the two combining to form a double-convex lens and an intermediate space of liquid located in the space, a cover having a perforation mounted on the vessel, an incandescent electric light located in the inner cylinder, and wires leading from the light through the opening in the cover, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

OTTO BERGER.

HILLIARY ELDRIDGE.

Witnesses:

C. H. STRICKLAND,
JOE MEYERS.